

Digital Video Recorders Quick Guide



BOSCH

Invented for life



Bosch Digital Video Recorders		DVR1A	DVR1C	DVR4C	Divar	Divar MR	DiBos Micro	DiBos Rackmount
System	Operating System	Embedded	Embedded	Embedded	Embedded	Embedded	Windows XP Embedded	Windows XP Embedded
	Rack Mountable	No	No	No	Yes	Yes	Yes	Yes
	SDK Available	No	No	No	Yes	No	HTML Interface	HTML Interface
	Warranty	3 Years	3 Years	3 Years	3 Years	3 Years	3 Years	3 Years
Video	Input Channels	1	1	4	6, 9, 16	8, 16	Analog: 6, 12 IP: 8	Analog: 6, 12, 18, 24, 30 IP: 16, 32
	Looping Video	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Output Composite Outs	1	1	1	2	2	2	2
	VGA	No	No	No	No	1	1	1 (plus optional 2nd)
Audio	Input Channels	0	2	4	n/a	4, 8	2, 4 (plus 8 from IP)	2, 4, 6, 8, 10 (plus up to 32 from IP cameras)
	Output Channels	0	2	4	n/a	1	1	1
	Compression Type	n/a	ADPCM	ADPCM	n/a	ADPCM2	G.726	G.726
	Sample Rate	n/a	8 KHz	8 KHz	n/a	8 KHz	32 KHz	32 KHz
Alarms	Synchronous Audio	n/a	Yes	No	n/a	Yes	No	No
	Associate Multiple Cameras to 1 Audio	n/a	n/a	No	n/a	Yes	Yes	Yes
	Inputs	1	1	4	6, 9 or 16 (one per video channel)	8, 16	12	32
	Relay Outputs	1	1	4	4	4, 8	12	16
Recording	Call Up Pre-position on Dome Cameras	n/a	n/a	n/a	Yes	No	Yes	Yes
	Increase Frame Rate on Alarm	Yes	Yes	Yes	Yes	Yes	Yes	Yes
	Simultaneous normal and event recording	Yes	Yes	Yes	Yes	No	Yes	Yes
	Multiple Camera Linking on Alarm Event	n/a	n/a	Yes	No	No	Yes	Yes
Compression	Notification via e-mail	No	No	Yes	No	Yes	Yes	Yes
	Notification to Remote PC	No	No	Yes	Yes	Yes	Yes	Yes
	Pre-alarm	Up to 220 Seconds	Up to 220 Seconds	Up to 30 Seconds	30 Seconds	Up to 60 Seconds	Yes	Yes
	Alarm Time	Unlimited	Unlimited	Up to 120 Seconds	Up to 60 Seconds	Up to 10 Minutes	Yes	Yes
IPS per Camera	Motion Detection	No	No	Yes	Yes	Yes	Yes	Yes
	Video	M-JPEG	M-JPEG	MPEG-4	Wavelet	MPEG-4	MPEG-4, JPEG	MPEG-4, JPEG
	Software or Hardware	Hardware	Hardware	Hardware	Hardware	Hardware	Video Hardware, Audio Software	
	PAL	50 IPS @ CIF	50 IPS @ CIF	100 IPS @ CIF	50 IPS @ 2CIF	400 IPS @ CIF	75/150 @ CIF	75/150/225/300/375 @ CIF
Recording Times	NTSC	60 IPS @ CIF	60 IPS @ CIF	120 IPS @ CIF	60 IPS @ 2CIF	480 IPS @ CIF	90/180 @ CIF	90/180/270/360/450 @ CIF
	PAL	25 IPS @ CIF (Normal) 50 IPS @ CIF (Alarm)	25 IPS (Normal) 50 IPS (Alarm)	25 IPS @ CIF	6 Ch.: 8.3 IPS @ 2CIF 9 Ch.: 5.0 IPS @ 2CIF 16 Ch.: 3.1 IPS @ 2CIF	25 IPS @ CIF	25 Per Camera Max 150 on a 12 Channel Unit @ CIF	25 Per Camera Max 375 on a 30 Channel Unit @ CIF
	NTSC	30 IPS @ CIF (Normal) 60 IPS @ CIF (Alarm)	30 IPS @ CIF (Normal) 60 IPS @ CIF (Alarm)	30 IPS @ CIF	6 Ch.: 10 IPS @ 2CIF 9 Ch.: 6.5 IPS @ 2CIF 16 Ch.: 3.75 IPS @ 2CIF	30 IPS @ CIF	30 Per Camera Max 180 on a 12 Channel Unit @ CIF	30 Per Camera Max 450 on a 30 Channel Unit @ CIF
	PAL	352 x 288	352 x 288	352 x 288	720 x 288	352 x 288/704 x 288/704 x 576	CIF/2CIF/4CIF Analog and IP Cameras	
Recording	NTSC	352 x 240	352 x 240	352 x 240	720 x 240	352 x 240/704 x 240/704 x 480	CIF/2CIF/4CIF Analog and IP Cameras	
	Individual Camera Adjustment (IPS, Quality)	n/a	n/a	No	Yes	Yes	Yes	Yes
	Schedule Recording Modes	Daily/Weekday/Weekend/Specific Day		Day/Night/Weekend	Day/Night/Weekend/Specific Day	Day/Week/Specific Day	Day/Night/Weekend/Holiday/Specific Day	
	HDD Overwrite Warning	No	No	Yes	No	Yes	Yes	Yes
Recording Times	Best Quality/Highest Res., 3 IPS Continuous, 50% Motion, Very Busy Scene (Outdoor), No Audio	6 Days (80 GB) @ CIF	12 Days (160 GB) @ CIF	7 Days (80 GB) @ CIF 13 Days (160 GB) @ CIF 26 Days (320 GB) @ CIF 50 Days (600 GB) @ CIF	6 Ch.: 5 Days (320 GB) @ 2CIF 9 Ch.: 4 Days (320 GB) @ 2CIF 9 Ch.: 7 Days (600 GB) @ 2CIF 16 Ch.: 4 Days (600 GB) @ 2CIF 16 Ch.: 6 Days (1000 GB) @ 2CIF	8 Ch.: 9 Days (500 GB) @ 4CIF 8 Ch.: 18 Days (1000 GB) @ 4CIF 16 Ch.: 9 Days (1000 GB) @ 4CIF 16 Ch.: 18 Days (2000 GB) @ 4CIF	6 Ch.: 10 Days (400 GB) @ 4CIF 12 Ch.: 5 Days (400 GB) @ 4CIF	6 Ch.: 19 Days (750 GB) @ 4CIF 12 Ch.: 10 Days (750 GB) @ 4CIF 18 Ch.: 9 Days (1000 GB) @ 4CIF 24 Ch.: 10 Days (1600 GB) @ 4CIF 30 Ch.: 8 Days (1600 GB) @ 4CIF
	Normal Quality/Standard Res., 3 IPS Continuous, 50% Motion, Very Busy Scene (Outdoor), No Audio	8 Days (160 GB) @ CIF	16 Days (160 GB) @ CIF	20 Days (80 GB) @ CIF 39 Days (160 GB) @ CIF 78 Days (320 GB) @ CIF 146 Days (600 GB) @ CIF	6 Ch.: 14 Days (320 GB) @ 2CIF 9 Ch.: 9 Days (320 GB) @ 2CIF 9 Ch.: 17 Days (600 GB) @ 2CIF 16 Ch.: 10 Days (600 GB) @ 2CIF 16 Ch.: 16 Days (1000 GB) @ 2CIF	8 Ch.: 36 Days (500 GB) @ CIF 8 Ch.: 72 Days (1000 GB) @ CIF 16 Ch.: 36 Days (1000 GB) @ CIF 16 Ch.: 72 Days (2000 GB) @ CIF	6 Ch.: 45 Days (400 GB) @ CIF 12 Ch.: 22 Days (400 GB) @ CIF	6 Ch.: 86 Days (750 GB) @ CIF 12 Ch.: 43 Days (750 GB) @ CIF 18 Ch.: 38 Days (1000 GB) @ CIF 24 Ch.: 46 Days (1600 GB) @ CIF 30 Ch.: 37 Days (1600 GB) @ CIF

Digital Video Recorders Quick Guide



BOSCH

Invented for life

Bosch Digital Video Recorders		DVR1A	DVR1C	DVR4C	Divar	Divar MR	DiBos Micro	DiBos Rackmount																																																																																																																									
Storage	Internal HDD	80 GB	160 GB	80 - 160 - 320 - 600 GB	80 - 160 - 320 - 600 - 1000 GB	160 - 320 - 500 - 1000 - 2000 GB	250 - 400 GB	250 - 500 - 750 - 1000 - 1600 GB																																																																																																																									
	Supported Devices	Compact Flash	Compact Flash	USB 1.1	Internal CD/DVD Writer Remote Client	Internal CD/DVD Writer, USB 2.0	CD-RW, DVD, USB 2.0, Network Drive, SCSI	CD-RW, DVD, USB 2.0, Network Drive, SCSI																																																																																																																									
	Export	JPEG	JPEG	Native, AVI, or JPEG	Native File Format	Native File Format	Bosch, ASF	Bosch, ASF																																																																																																																									
	Data Format	Manual	Manual	Manual	Manual	Manual or Automatic	Manual or Automatic	Manual or Automatic																																																																																																																									
	Back-up Mode	No	No	No	Yes, DVSA (Lite and Premium)	No	Yes, DVSA (Lite and Premium)	Yes, DVSA (Lite and Premium)																																																																																																																									
	Support SCSI Disk Array	n/a	n/a	n/a	12 TB*	n/a	13.8 TB**	13.8 TB**																																																																																																																									
Search	Timeline Search Bar (Color Coded)	No	No	Yes on Remote Software	Yes on Remote Software	Date/time, Camera Number, Events, Motion, Bookmark, Smart Motion Search	Yes	Yes																																																																																																																									
	Search Mode	Date/time, Events, or Recordings List		Date/time, Events, Motion, Text	Date/time, Camera Number, Events, Motion, Smart Motion Search		Date/time, Camera Name, Events, Pre-Alarm, Motion, Smart Motion Search																																																																																																																										
	Smart Motion Search – Motion in specific area	No	No	No	Yes	Yes	Yes	Yes																																																																																																																									
Display	Live Resolution	PAL NTSC	720 x 576 720 x 484	720 x 576 720 x 484	720 x 576 720 x 484	720 x 576 720 x 484	CIF/2CIF/4CIF Analog and IP Cameras CIF/2CIF/4CIF Analog and IP Cameras	CIF/2CIF/4CIF Analog and IP Cameras CIF/2CIF/4CIF Analog and IP Cameras																																																																																																																									
	Screen Division (Multi-screen)	Full, 2x2, 3x3 (w/ Quad or Mux attached)		Full, 2x2, Sequence	Full, 2x2, 3x3, 4x4	Full, Sequence, 2x2, 3x3, 4x4, 5+1, 7+1	Full, 2x2, 3x3, 4x4, 5x6	Full, 2x2, 3x3, 4x4, 5x6																																																																																																																									
	Digital Zoom	No	No	No	Yes	No	Yes	Yes																																																																																																																									
Security/User Management	Camera Lock-outs by User	No	No	No	Yes	Yes	Yes	Yes																																																																																																																									
	User Levels	1	3	2	6	3	Unlimited	Unlimited																																																																																																																									
	Add/Delete	No	No	No	Yes	Yes	Yes	Yes																																																																																																																									
	User Control	No	No	Yes	Yes	Yes	Yes	Yes																																																																																																																									
	Set Viewing Permissions	n/a	No	No	No	No	Yes - LDAP	Yes - LDAP																																																																																																																									
	Centralized User Management	n/a	No	No	No	No	Yes - LDAP	Yes - LDAP																																																																																																																									
Remote Access	Event Logging by User	No	No	No	No	No	Yes	Yes																																																																																																																									
	Data Integrity Check (Watermarking, etc.)	Yes	Yes	Yes	Yes	Yes	Yes	Yes																																																																																																																									
	Network Protocol	10BaseT Ethernet TCP/IP	10BaseT Ethernet TCP/IP	10/100 Ethernet TCP/IP	10/100 Ethernet TCP/IP	10/100 Ethernet TCP/IP	10/100/1000 Ethernet TCP/IP, UDP Tunneling	10/100/1000 Ethernet TCP/IP, UDP Tunneling																																																																																																																									
	Web Browser Access	No	Yes	No	Yes	Yes	Yes	Yes																																																																																																																									
	Simultaneous Accessible Users	n/a	4	5	6	5	20 with software; 5 with web browser																																																																																																																										
	Resolution	n/a	n/a	720 x 576 (PAL) 720 x 484 (NTSC)	720 x 576 (PAL) 720 x 484 (NTSC)	352 x 288 (PAL) 352 x 240 (NTSC)	CIF/2CIF/4CIF Analog and IP Cameras																																																																																																																										
Remote PC Client	Full Admin Control	n/a	n/a	Yes	Yes	Yes	Yes, Remote Desktop	Yes, Remote Desktop																																																																																																																									
	PTZ Control	n/a	n/a	n/a	Yes	Yes	Yes	Yes																																																																																																																									
	Export Options	n/a	n/a	Native, AVI, or JPEG	Native File Format (all cameras), .AVI (single camera)	n/a	Bosch (All Cameras) ASF (Individual and Multiple Cameras)																																																																																																																										
Other Features	Instant Playback	No	No	No	Yes	Yes	Yes	Yes																																																																																																																									
	Bilinx/Up-the-Coax Camera Control	No	No	No	Yes	No	Yes	Yes																																																																																																																									
	Digital Zoom on Playback	No	No	No	Yes	No	Yes	Yes																																																																																																																									
	PTZ Joystick Control	No	No	No	Yes	Yes	Yes - DiBos/Bosch VMS	Yes - DiBos/Bosch VMS																																																																																																																									
	ATM/POS Interface	No	No	No	Yes	No	No	No																																																																																																																									
	OPC Support	No	No	No	Yes	No	Yes	Yes																																																																																																																									
Ordering Information	Part Numbers/Ordering Charts	DVR1A1081	DVR1C1161	DVR4C1081 (80 GB) DVR4C1161 (160 GB) DVR4C2161 (320 GB) DVR4C2301 (600 GB)	<table border="1"> <tr> <td>Inputs</td> <td>16</td> <td># of Disks</td> <td>1</td> </tr> <tr> <td>Type</td> <td>DVR</td> <td>Revision</td> <td>2</td> </tr> <tr> <td>Divar with DVD writer</td> <td>E</td> <td>08</td> <td></td> </tr> <tr> <td>Divar with Bilinx and DVD Writer</td> <td>F</td> <td>16</td> <td></td> </tr> <tr> <td></td> <td>H</td> <td>30</td> <td></td> </tr> <tr> <td>Avail. on 15 Ch. units only</td> <td>50</td> <td>Capacity (x 10 GB)</td> <td></td> </tr> </table>	Inputs	16	# of Disks	1	Type	DVR	Revision	2	Divar with DVD writer	E	08		Divar with Bilinx and DVD Writer	F	16			H	30		Avail. on 15 Ch. units only	50	Capacity (x 10 GB)		DVR-8K-016A (160 GB) DVR-16K-032A (320 GB) DVR-8L-016A (160 GB/DVD) DVR-8L-032A (320 GB/DVD) DVR-8L-050A (500 GB/DVD) DVR-8L-100A (1000 GB/DVD) DVR-16L-032A (320 GB/DVD) DVR-16L-050A (500 GB/DVD) DVR-16L-100A (1000 GB/DVD) DVR-16L-200A (2000 GB/DVD)	<table border="1"> <tr> <td>Inputs</td> <td>12</td> <td>Capacity (x 10 GB)</td> <td>012</td> </tr> <tr> <td>Type</td> <td>DB</td> <td>Model</td> <td>06</td> </tr> <tr> <td>6 inputs and 750 GB</td> <td>120, 250, 400 GB</td> <td>12 inputs and 750 GB</td> <td>025</td> </tr> <tr> <td></td> <td>12 inputs and 250 GB</td> <td>12 inputs and 500 GB</td> <td>040</td> </tr> <tr> <td>12 inputs and 1000 GB</td> <td>250, 400 GB</td> <td>12 inputs and 1000 GB</td> <td>075</td> </tr> <tr> <td></td> <td>250, 400 GB</td> <td>12 inputs and 1600 GB</td> <td>100</td> </tr> <tr> <td>12 inputs and 1600 GB</td> <td>500, 1000, 1600 GB</td> <td>12 inputs and 1600 GB</td> <td>160</td> </tr> <tr> <td></td> <td>500, 1000, 1600 GB</td> <td>6 inputs and 750 GB</td> <td>025</td> </tr> </table>	Inputs	12	Capacity (x 10 GB)	012	Type	DB	Model	06	6 inputs and 750 GB	120, 250, 400 GB	12 inputs and 750 GB	025		12 inputs and 250 GB	12 inputs and 500 GB	040	12 inputs and 1000 GB	250, 400 GB	12 inputs and 1000 GB	075		250, 400 GB	12 inputs and 1600 GB	100	12 inputs and 1600 GB	500, 1000, 1600 GB	12 inputs and 1600 GB	160		500, 1000, 1600 GB	6 inputs and 750 GB	025	<table border="1"> <tr> <td>Inputs</td> <td>30</td> <td>Capacity (x 10 GB)</td> <td>050</td> </tr> <tr> <td>Type</td> <td>DB</td> <td>Model</td> <td>06</td> </tr> <tr> <td>6 inputs and 750 GB</td> <td>120, 250, 400 GB</td> <td>12 inputs and 750 GB</td> <td>075</td> </tr> <tr> <td></td> <td>12 inputs and 250 GB</td> <td>12 inputs and 500 GB</td> <td>100</td> </tr> <tr> <td>12 inputs and 500 GB</td> <td>250, 400 GB</td> <td>12 inputs and 500 GB</td> <td>125</td> </tr> <tr> <td></td> <td>250, 400 GB</td> <td>12 inputs and 1000 GB</td> <td>160</td> </tr> <tr> <td>12 inputs and 1000 GB</td> <td>500, 1000, 1600 GB</td> <td>12 inputs and 1000 GB</td> <td>200</td> </tr> <tr> <td></td> <td>500, 1000, 1600 GB</td> <td>6 inputs and 750 GB</td> <td>050</td> </tr> </table>	Inputs	30	Capacity (x 10 GB)	050	Type	DB	Model	06	6 inputs and 750 GB	120, 250, 400 GB	12 inputs and 750 GB	075		12 inputs and 250 GB	12 inputs and 500 GB	100	12 inputs and 500 GB	250, 400 GB	12 inputs and 500 GB	125		250, 400 GB	12 inputs and 1000 GB	160	12 inputs and 1000 GB	500, 1000, 1600 GB	12 inputs and 1000 GB	200		500, 1000, 1600 GB	6 inputs and 750 GB	050	<table border="1"> <tr> <td>Inputs</td> <td>30</td> <td>Capacity (x 10 GB)</td> <td>025</td> </tr> <tr> <td>Type</td> <td>DB</td> <td>Model</td> <td>06</td> </tr> <tr> <td>6 inputs and 750 GB</td> <td>120, 250, 400 GB</td> <td>12 inputs and 750 GB</td> <td>050</td> </tr> <tr> <td></td> <td>12 inputs and 250 GB</td> <td>12 inputs and 500 GB</td> <td>075</td> </tr> <tr> <td>12 inputs and 500 GB</td> <td>250, 400 GB</td> <td>12 inputs and 500 GB</td> <td>100</td> </tr> <tr> <td></td> <td>250, 400 GB</td> <td>12 inputs and 1000 GB</td> <td>160</td> </tr> <tr> <td>12 inputs and 1000 GB</td> <td>500, 1000, 1600 GB</td> <td>12 inputs and 1000 GB</td> <td>200</td> </tr> <tr> <td></td> <td>500, 1000, 1600 GB</td> <td>6 inputs and 750 GB</td> <td>025</td> </tr> </table>	Inputs	30	Capacity (x 10 GB)	025	Type	DB	Model	06	6 inputs and 750 GB	120, 250, 400 GB	12 inputs and 750 GB	050		12 inputs and 250 GB	12 inputs and 500 GB	075	12 inputs and 500 GB	250, 400 GB	12 inputs and 500 GB	100		250, 400 GB	12 inputs and 1000 GB	160	12 inputs and 1000 GB	500, 1000, 1600 GB	12 inputs and 1000 GB	200		500, 1000, 1600 GB	6 inputs and 750 GB	025
Inputs	16	# of Disks	1																																																																																																																														
Type	DVR	Revision	2																																																																																																																														
Divar with DVD writer	E	08																																																																																																																															
Divar with Bilinx and DVD Writer	F	16																																																																																																																															
	H	30																																																																																																																															
Avail. on 15 Ch. units only	50	Capacity (x 10 GB)																																																																																																																															
Inputs	12	Capacity (x 10 GB)	012																																																																																																																														
Type	DB	Model	06																																																																																																																														
6 inputs and 750 GB	120, 250, 400 GB	12 inputs and 750 GB	025																																																																																																																														
	12 inputs and 250 GB	12 inputs and 500 GB	040																																																																																																																														
12 inputs and 1000 GB	250, 400 GB	12 inputs and 1000 GB	075																																																																																																																														
	250, 400 GB	12 inputs and 1600 GB	100																																																																																																																														
12 inputs and 1600 GB	500, 1000, 1600 GB	12 inputs and 1600 GB	160																																																																																																																														
	500, 1000, 1600 GB	6 inputs and 750 GB	025																																																																																																																														
Inputs	30	Capacity (x 10 GB)	050																																																																																																																														
Type	DB	Model	06																																																																																																																														
6 inputs and 750 GB	120, 250, 400 GB	12 inputs and 750 GB	075																																																																																																																														
	12 inputs and 250 GB	12 inputs and 500 GB	100																																																																																																																														
12 inputs and 500 GB	250, 400 GB	12 inputs and 500 GB	125																																																																																																																														
	250, 400 GB	12 inputs and 1000 GB	160																																																																																																																														
12 inputs and 1000 GB	500, 1000, 1600 GB	12 inputs and 1000 GB	200																																																																																																																														
	500, 1000, 1600 GB	6 inputs and 750 GB	050																																																																																																																														
Inputs	30	Capacity (x 10 GB)	025																																																																																																																														
Type	DB	Model	06																																																																																																																														
6 inputs and 750 GB	120, 250, 400 GB	12 inputs and 750 GB	050																																																																																																																														
	12 inputs and 250 GB	12 inputs and 500 GB	075																																																																																																																														
12 inputs and 500 GB	250, 400 GB	12 inputs and 500 GB	100																																																																																																																														
	250, 400 GB	12 inputs and 1000 GB	160																																																																																																																														
12 inputs and 1000 GB	500, 1000, 1600 GB	12 inputs and 1000 GB	200																																																																																																																														
	500, 1000, 1600 GB	6 inputs and 750 GB	025																																																																																																																														

* Due to SCSI specifications, the daisy chaining of more than two Digital Video Storage Array subsystems (DVA-08K/DVA-16K) on a single Divar is NOT RECOMMENDED. Divar can address up to 6 SCSI IDs (7 for units without DVD writer) and a maximum of 2TB per ID (12TB with DVD writer or 14TB for units without a DVD writer). Stated capacities assume JBOD configuration 8% overhead on the HDDs.

** Due to SCSI specifications, the daisy chaining of more than three Digital Video Storage Array subsystems (DVA-08K/DVA-16K) on a single DiBos is NOT RECOMMENDED. The maximum configuration is (2) DVA-16Ks and (1) DVA16K and (2) DVA08Ks daisy chained. Stated capacities assume JBOD configuration and 8% overhead on the HDDs.